R. Michael Turnnspeed, Director

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Administration Water Pollution Control Facsimile 687-5856 Mining Regulations & Reclamation Facsimile 684-5259 State of Nevada KENNY C. GUINN Governor



Waste Management Corrective Actions Federal Facilities

Air Quality Water Quality Planning

Facsimile 687-6396

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL PROTECTION

333 W. Nye Lane, Room 138 Carson City, Nevada 89706

FACT SHEET (pursuant to NAC 445A.236)

Applicant: Barrick Goldstrike Mines Inc.

P.O. Box 29

Elko, Nevada 89803

Permit:NV0022675 - Renewal

Location: Boulder Valley Facility – Outfall 001

approximately 27 miles northwest of Carlin

Eureka County, Nevada

Latitude: 40° 56′ 49″ N; Longitude 116° 26′ 41″ W Township 36 N, Range 49 E, Section 33 MDB&M

Humboldt River Discharge – Outfall 002 approximately 3 miles west of Dunphy

Eureka County, Nevada

Latitude: 40° 42' 14" N; Longitude: 116° 34' 44" W Township 33 N, Range 48 E, Section 29 MDB&M

General: The Applicant has applied for a National Pollutant Discharge Elimination System (NPDES) permit renewal to extend the authorization to discharge a maximum of 100.8 million gallons per day (MGD), 30-day average, of treated groundwater to the Humboldt River. The Applicant has not discharged under NPDES Permit NV0022675 since February 1999. A re-issued permit will maintain operational flexibility and allow for rapid response to market fluctuations.

The Applicant owns and operates a gold mining operation located in Eureka and Elko Counties, Nevada. To ensure stability of open pit mine walls, to enable the development of underground mines, and to facilitate optimum recovery of the precious metals resources, the Applicant has developed and implemented a groundwater management program; pumping started in 1990. Within the cone of depression created by the groundwater pumping, there are several gold deposits owned by the Applicant, as well as other mining companies. The Applicant may enter into agreements with other companies to accept, treat, and discharge water produced by other mining companies under this permit. According to

the Applicant, this NPDES discharge permit is expected to be adequate to manage surface discharge rates associated with existing and presently anticipated mining development in the Little Boulder Basin area.

The de-watering water is used as make-up water for mining operations and processing, and as irrigation water in Boulder Valley. In addition to the surface water discharge, excess water is permitted for infiltration, the least expensive disposal option, and injection into the groundwater system in Boulder Valley. These activities are authorized by other permits and approvals. The NPDES permit will cover water pumped from the TS Ranch Dam coffer pond for treatment and discharge to surface waters only.

The groundwater associated with the discharge is carbonate saturated with associated calcium and magnesium hardness. The quality of the raw groundwater is generally good, however, it does not meet the Humboldt River water quality standards for total dissolved solids (TDS), boron, fluoride, dissolved oxygen and temperature. Therefore, in order to discharge, the water must be treated to meet the discharge standards. The treatment process includes precipitation, clarification/settling and neutralization followed by cooling through cooling towers. The treatment process results in compliance with all Humboldt River, Battle Mountain Gage, drinking water, aquatic life, and irrigation standards at the discharge points.

An individual containment structure was constructed to contain 110% of the volume of the acid storage tank and the milk of lime slurry, magnesium sulfate, tank. The other chemicals used in the treatment process do not require secondary containment. The treatment site is graded and bermed to divert any spill to an unlined pond that is designed to contain 110% of the clarifier volume, the largest vessel, plus the contribution from the 25-year, 24-hour storm event. The clarifier sludge is trucked to the processing area and used in the autoclave processing of sulfide ores.

The approximately 20-mile long conveyance system connects the treatment facilities with the Humboldt River outfall through a system of pipelines and lined open channels and ponds. The upper section of the conveyance system is a buried pipeline to eliminate any potential conflicts associated with wildlife migration routes or the center pivot irrigation fields. The upper section consists of approximately 4,300 feet of 66-inch diameter and 23,500 feet of 48-inch diameter epoxy-lined steel pipe. In the 73,000-foot central section, a 60-mil HDPE lined and fenced open canal was constructed to convey the water to the 90-foot square, 60-mil HDPE lined compensating pond. A concrete head structure in the pond marks the start of the lower pipeline section with the first 2,000 feet of this reinforced concrete pipe being 84-inch diameter and the remaining 4,600 feet being 72-inch diameter. The pipeline crosses Whitehouse Creek and the Union Pacific railroad tracks to the Humboldt River. A slotted, steel diffuser was installed at the end of the concrete pipe to reduce the potential for erosion and scouring of the riverbed and bank. This area of the river is armored with riprap. The Whitehouse Ditch outfall has not been designed.

Receiving Water Characteristics: The Humboldt River at the Battle Mountain Gage, NAC 445A.205, standards apply to this stream segment. The listed beneficial uses of this segment include aquatic life (warm-water fishery), water contact recreation, wildlife propagation, irrigation, stock watering, municipal or domestic supply, and non-contact recreation.

Humboldt River water in the area of the discharges, from the Palisade Gage to the Battle Mountain Gage, is a calcium-bicarbonate type with a pH of 8.2 to 8.6. TDS and specific conductance generally range from 250 to 426 milligrams per liter (mg/L) and 413 to 690 micromhos per centimeter, respectively. From February 1989 through June 2001, the minimum and maximum TDS concentrations recorded at the Battle Mountain Gage were 228 mg/L and 560 mg/L, respectively. Temperature of the river water varies considerably with season, being primarily dependent on ambient air temperature with a minimum temperature of -1°C and a maximum temperature of 25.5°C during the same February 1989 through June 2001 time period. This segment generally meets the appropriate water quality standards except for

frequent exceedances of the NAC 445A.205 standards for turbidity, total phosphorus (TP) and total suspended solids (TSS).

Flow: The draft permit includes permit limitations of 100.8 MGD for the 30-day average discharge and 110.0 MGD for the daily maximum discharge. The Applicant has not discharged since February 5, 1999. During the period of discharge, the 30-day average discharge was 50.9 MGD with the highest 30-day average discharge, 91.6 MGD, in January 1998. The maximum daily flow was 99.8 MGD.

Quantities: Section 303 (d) (1) (C) of the Clean Water Act requires that Total Maximum Daily Loads (TMDLs) shall be established at a level necessary to implement the applicable water quality standards. Any discharge which improves the existing water quality, and has permitted discharge limits as strict or stricter than the water quality standards will be considered in compliance with the TMDLs.

The 1998 303 (d) List for the Humboldt River Basin, Palisade to Battle Mountain, lists existing TMDLs as TP and TSS. The NAC 445A.205 TP standard is an April through November seasonal average of less than 0.1 mg/L. From 1993 through 2000 (2001 data is incomplete), the TP seasonal average concentration has ranged from 0.15 mg/L in 1993 to 0.28 mg/L in 1998, with a 2000 seasonal average of 0.23 mg/L. A seasonal TP permit limitation of 0.1 mg/L, the water quality standard, will result in an improvement of the existing water quality, therefore, the discharge will be in compliance with the TP TMDL.

The NAC 445A.205 TSS standard is an annual median concentration of less than 80 mg/L. From 1993 through 2000 (2001 data is incomplete), the TSS annual median has ranged from 59 mg/L in 1993 to 188 mg/L in 1996, with a 2000 annual median of 108 mg/L. A daily maximum TSS permit limitation of 30 mg/L and a 30-day average TSS permit limitation of 20 mg/L will result in an annual median TSS concentration less than 80 mg/L and in an improvement of the existing water quality, therefore, the discharge will be in compliance with the TSS TMDL.

Proposed Effluent Limitations: During the period beginning on the effective date of this permit and lasting until the permit expires, the Permittee is authorized to discharge to the Humboldt River through Outfall 002, the unnamed concrete pipeline outfall structure, and/or Whitehouse Ditch and Rock Creek.

- a. Effluent samples taken in compliance with the monitoring requirements specified below shall be taken at the following locations:
 - i. At the outfall structure, Outfall 001, of the Boulder Valley Facility;
 - ii. At the outfall structure, Outfall 002, of the unnamed pipeline to the Humboldt River;
 - iii. In the Humboldt River, three (3) meters upstream of the confluence with Rock Creek, as near as possible to the centroid of the river flow;
 - iv. In the Humboldt River, ten (10) meters downstream of the confluence with Rock Creek, as near as possible to the centroid of the discharge flow;
 - v. In the Humboldt River, three (3) meters upstream of the confluence with the unnamed pipeline, as near as possible to the centroid of the river flow;
 - vi. In the Humboldt River, ten (10) meters downstream of the confluence with the unnamed pipeline, as near as possible to the centroid of the discharge flow;
 - vii. In the Whitehouse Ditch, ten (10) meters downstream of the confluence with the lined canal, as near as possible to the centroid of flow;
 - viii. In Rock Creek, three (3) meters upstream of the confluence with Whitehouse Ditch, as near as possible to the centroid of flow; and

- In Rock Creek, ten (10) meters downstream of the confluence with Whitehouse Ditch, as near as possible to the centroid of the discharge flow. ix.
- The discharge shall be limited and monitored by the Permittee as specified below: b.

PARAMETERS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	30-Day Average	Daily <u>Maximum</u>	Sample <u>Locations</u>	Measurement <u>Frequency</u>	SAMPLE TYPE
Flow (MGD)	100.8	110.0	i.	Continuous	Totalizer ⁽¹⁾
Arsenic (mg/L)		0.05 ⁽¹⁴⁾	i.	Weekly	Discrete ^(2, 4)
Chlorides (mg/L)	50.0	70.0	i.	Monthly	Discrete
Copper (mg/L)	0.016	0.024	i.	Weekly	Discrete ^(2, 4, 5, 6)
Cyanide, Total (mg/L)	0.0052	0.022	i.	Monthly	Discrete ⁽¹⁰⁾
Dissolved Oxygen (mg/L)		≥ 5.0	ii., vii.	Weekly	Discrete ⁽⁹⁾
Iron (mg/L)		1.0	i.	Weekly	Discrete ^(2, 4)
Lead (mg/L)	0.002	0.078	i.	Weekly	Discrete ^(2, 4, 5, 6)
Total Suspended Solids (mg/L)	20	30	i.	Monthly	Discrete
Total Dissolved Solids (mg/L)	425	520	i.	Monthly	Discrete
Total Nitrogen – N (mg/L)	1.9	⁽¹²⁾ 4.0 ⁽¹²⁾	i.	Monthly	Discrete
Nitrate – N (mg/L)		10.0	i.	Monthly	Discrete
Nitrite – N (mg/L)		1.0	i.	Monthly	Discrete
Ammonia – N, un-ionized (mg/L)		0.02	i.	Monthly	Discrete
Sodium (SAR)		8.0	i.	Quarterly	Discrete
Fluoride (mg/L)		1.0	i.	Weekly	Discrete ⁽⁴⁾
Boron (mg/L)		0.75	i.	Weekly	Discrete ⁽⁴⁾
Total Phosphorus – P (mg/L)		¹³ 0.1 ¹³	i.	Weekly	Discrete ⁽⁴⁾
Turbidity (NTU)	20	50	i.	Monthly	Discrete
Zinc (mg/L)	0.14	0.15	i.	Monthly	Discrete ^(2, 4, 5, 6)
PH (SU)	Between 7	0.0 and 8.5	i.	Monthly	Discrete
Profile I ³	Monitor and Report		i.	October	Discrete
Temperature (°C)	Monitor and Report $T_{iv} \leq T_{iii} + 2^{(7)}$		i., iii., v., viii. iv.	Monthly Discrete ⁽	
	$T_{iv} \le T_{iii} + 2^{-(7)}$ $T_{vi} \le T_{v} + 2^{-(7)}$		vi.		Discrete ⁽⁸⁾
	$T_{\text{ix}} \le 1_{\text{v}} + 2^{-7}$ $T_{\text{ix}} \le 34 \text{ or}$ $T_{\text{ix}} \le T_{\text{viii}} + 3^{-(7,11)}$		ix.		
Hardness	Monitor and Report		v.	Monthly	Discrete

Footnotes:

Flows shall be monitored and recorded at Outfall 001 with a totalizer. Flow is limited to 50.4 MGD via Whitehouse Ditch. Analyze as Total Recoverable Metal per 40 CFR \S 136.

- ³: See Attachment I. If a constituent is ≥ 90% of the most restrictive water quality standard, pursuant to Nevada Administrative Code (NAC) 445A.144, then the Permittee shall add it to the list of monitored constituents above. Submit a y early analysis of the Profile I list of constituents on a copy of the form provided as Attachment I. Attachment I is appended to this permit and made a part thereof.
- 4: Monitoring frequency will be reduced to monthly after one year of weekly monitoring with no exceedances.
- 5: These limits shall remain in place until the Permittee develops the translator factor to calculate new limits. The method of calculation is in Attachment III appended to this permit and made part thereof.
- ⁶: If reported values are greater than permit limits, the Permittee may calculate actual values, based on the hardness (H) of the river water and the formulas delineated below for each metal:

 $\begin{array}{c} \text{Copper} \\ \text{Daily Maximum:} \\ 30\text{-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.9422 \; \ln(\text{H}) - 1.464 \} \\ \text{concentration} = 0.85 \; \text{exp} \{ 0.8545 \; \ln(\text{H}) - 1.466 \} \\ \text{Lead} \\ \text{Daily Maximum:} \\ 30\text{-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.50 \; \text{exp} \{ 1.273 \; \ln(\text{H}) - 1.460 \} \\ \text{concentration} = 0.25 \; \text{exp} \{ 1.273 \; \ln(\text{H}) - 4.705 \} \\ \text{Zinc} \\ \text{Daily Maximum:} \\ 30\text{-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.8604 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.8604 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.7614 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.7614 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.8604 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.8604 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.8604 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.8604 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.8604 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.7614 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.8604 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.8604 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.8604 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.8604 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.7614 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.7614 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text{exp} \{ 0.8473 \; \ln(\text{H}) + 0.7614 \} \\ \text{30-day Average:} \end{array} \quad \begin{array}{c} \text{concentration} = 0.85 \; \text$

- ⁷: If the water quality standards, NAC 445A.205, are revised, the permit shall be modified to reflect the changes and the Permittee shall be required to comply with the new limits.
- The Permittee is required to monitor the temperature at locations iii., iv., viii., and ix. only during periods of discharge to Whitehouse Ditch and monitor the temperature at locations v. and vi. only during periods of discharge from the unnamed pipeline to the Humboldt River.
- 9: The Permittee is required to monitor dissolved ox ygen at location ii. only during periods of discharge from the unnamed pipeline to the Humboldt River and to monitor at location vii. o nly during periods of discharge to Whitehouse Ditch.
- Any detection of cyanide shall trigger a reporting requirement as delineated under Part II.A.4.b of this permit.
- When there is no flow in Rock Creek, the discharge temperature from Whitehouse Ditch shall be 34°C or less. When there is flow in Rock Creek, the Whitehouse Ditch discharge temperature shall be no more than 3°C greater than the Rock Creek water temperature.
- 12: The total nitrogen as N (TN) daily maximum of 4.0 mg/L is applicable April through November. There is no TN daily maximum December through March.
- 13: The total phosphorus as P (TP) daily maximum of 0.1 mg/L is applicable April through November. There is no TP daily maximum December through March.
- In response to the US EPA's October 2001 decision to reduce the arsenic maximum contaminant level to 0.010 mg/L and to require water systems to meet this standard by January 2006, the Division is reviewing NAC 445A.144, Standards for Toxic Materials Applicable to Designated Waters. If the State arsenic standard is revised during the term of this permit, the daily maximum discharge limitation will be modified accordingly.

MGD: Million gallons per day. Temperature at sampling location iii. T_{iii}: mg/L: Milligrams per liter. T_{iv}: Temperature at sampling location iv. -N: As nitrogen. T_v : Temperature at sampling location v. SAR: Sodium adsorption ratio. T_{vi}: Temperature at sampling location vi. -P: As phosphorus. Temperature at sampling location viii. T_{viii} : NTU: Nephelometric turbidity units. Temperature at sampling location ix. SU: Standard units. °C: Degrees Celsius.

Schedule of Compliance and Special Conditions: The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications that the Administrator may make in approving the schedule of compliance.

- a. The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit.
- b. The Permittee shall submit reports illustrating compliance or noncompliance with specified compliance dates within 14 days of any respective, scheduled compliance date.
- c. The Permittee shall provide written notification to the Division sixty (60) days prior to acceptance of water for treatment at the Boulder Valley Facility and/or discharge under this permit from any source other than the Permittee's mine dewatering activities.

- d. Thirty (30) days prior to discharge to Whitehouse Ditch, the Permittee shall submit Nevada licensed Professional Engineer stamped as-built drawings of the diversion structure to Whitehouse Ditch and all related control structures. A revised O&M Manual shall be submitted at the same time.
- e. If chromium is detected in the discharge at a concentration greater than 0.005 mg/L, the normal analytical detection limit, the Permittee shall complete a study to determine the chromium speciation. This study shall be submitted to the Division within forty-five (45) days of chromium detection.

There are no special conditions.

Rationale for Permit Requirements: The Applicant is proposing to utilize a treatment process which will result in compliance with all Humboldt River water quality standards at the treatment plant outfall (001) except for temperature and dissolved oxygen. The applicable temperature and dissolved oxygen standards will be achieved at Rock Creek and the Humboldt River by use of natural cooling through the proposed conveyance system and by use of cooling towers as needed.

<u>Flow</u>: The flow rate is based on the design capacity of the Boulder Valley Facility.

<u>Arsenic</u>: The arsenic limitation is based on the Standards for Toxic Materials Applicable to Designated Waters, NAC 445A.144, Municipal or Domestic Supply Standard. If this standard is revised during the term of the permit, the permitted daily maximum discharge limitation will be modified accordingly.

With a detection limit 0.001 mg/L, arsenic was not detected in the Permittee's discharge from July 1998 through January 1999. The average arsenic concentration in the discharge from September 1997 though January 1999 was approximately 0.002 mg/L, with the non-detects assumed to be 0.001 mg/L. The maximum arsenic concentration in the discharge was 0.009 mg/L in September 1997.

<u>Chlorides</u>: The chlorides limitations are based on the Humboldt River at Battle Mountain Gage, Standards of Water Quality, NAC 445A.205, requirements to maintain existing higher quality. The daily maximum, 70 mg/L, is the single value limitation and the 30-day average, 50 mg/L, is the annual average limitation with municipal or domestic supply as the most restrictive use.

<u>Copper</u>: The copper limitations are based on the Standards for Toxic Materials Applicable to Designated Waters, NAC 445A.144, Aquatic Life Standards, using a hardness of 167 mg/L as CaCO₃. The hardness value is the average of the fourteen analyzed samples taken three meters upstream of Outfall 002 from October 1997 through December 1998. The daily maximum, 0.024 mg/L, is the 1-hour average, acute, limitation and the 30-day average, 0.016 mg/L, is the 96-hour, chronic, limitation.

<u>Total Cyanide</u>: The total cyanide limitations are based on the Standards for Toxic Materials Applicable to Designated Waters, NAC 445A.144, Aquatic Life Standards. The daily maximum, 0.022 mg/L, is the 1-hour average, acute, limitation and the 30-day average, 0.0052 mg/L, is the 96-hour, chronic, limitation.

<u>Dissolved Oxygen</u>: The dissolved oxygen limitation is based on the Humboldt River at Battle Mountain Gage, Standards of Water Quality, NAC 445A.205, with warm-water fishery as the most restrictive beneficial use.

<u>Iron</u>: The iron limitation is based on the Standards for Toxic Materials Applicable to Designated Waters, NAC 445A.144, Aquatic Life Standards.

<u>Lead</u>: The lead limitations are based on the Standards for Toxic Materials Applicable to Designated Waters, NAC 445A.144, Aquatic Life Standards, using a hardness of 167 mg/L as CaCO₃. The hardness value is the average of the fourteen analyzed samples taken three meters upstream of Outfall 002 from October 1997 through December 1998. The daily maximum, 0.078 mg/L, is the 1-hour average, acute, limitation and the 30-day average, 0.002 mg/L, is the 96-hour, chronic, limitation.

<u>Total Suspended Solids</u>: The TSS limitations are based on the design performance standards of the facility. From September 1997 through January 1999, the maximum TSS concentration at Outfall 001 was 5 mg/L, demonstrating that the permit limits can be met.

Because all flow downgradient of Outfall 001 is within synthetic liners or pipes, the monitoring of TSS ten meters downgradient of Outfall 001 has been eliminated from the permit.

<u>Total Dissolved Solids</u>: The total dissolved solids limitations are based on the Humboldt River at Battle Mountain Gage, Standards of Water Quality, NAC 445A.205, requirements to maintain existing higher quality. The daily maximum, 520 mg/L, is the single value limitation and the 30-day average, 425 mg/L, is the annual average limitation with municipal or domestic supply as the most restrictive use.

<u>Total Nitrogen</u>: The total nitrogen as N limitations are based on the Humboldt River at Battle Mountain Gage, Standards of Water Quality, NAC 445A.205, requirements to maintain existing higher quality. The daily maximum, 4.0 mg/L, is the single value, April through November limitation and the 30-day average, 1.9 mg/L, is the annual average limitation with municipal or domestic supply as the most restrictive use.

<u>Nitrate</u>: The nitrate limitation is based on the Humboldt River at Battle Mountain Gage, Standards of Water Quality, NAC 445A.205. The daily maximum, 10 mg/L, is the nitrate single value limitation for municipal or domestic supply, the most restrictive beneficial use.

<u>Nitrite</u>: The nitrite limitation is based on the Humboldt River at Battle Mountain Gage, Standards of Water Quality, NAC 445A.205. The daily maximum, 1.0 mg/L, is the nitrite single value limitation for municipal or domestic supply, the most restrictive beneficial use.

<u>Un-ionized Ammonia</u>: The un-ionized ammonia as N limitation is based on the Humboldt River at Battle Mountain Gage, Standards of Water Quality, NAC 445A.205. The daily maximum, 0.02 mg/L, is the un-ionized ammonia single value limitation for warm-water fishery, the most restrictive beneficial use.

<u>Sodium</u>: The sodium limitation is based on the Humboldt River at Battle Mountain Gage, Standards of Water Quality, NAC 445A.205, with irrigation as the most restrictive beneficial use.

<u>Fluoride</u>: The fluoride limitation is based on the Standards for Toxic Materials Applicable to Designated Waters, NAC 445A.144, Irrigation Standards.

<u>Boron</u>: The boron limitation is based on the Standards for Toxic Materials Applicable to Designated Waters, NAC 445A.144, Irrigation Standards.

<u>Total Phosphorus</u>: The total phosphorus as P seasonal limitation, April through November, is based on the Humboldt River at Battle Mountain, Standards of Water Quality, NAC 445A.205, with warm-water fishery as the most restrictive beneficial use.

<u>Turbidity</u>: The turbidity limitation is based on the Humboldt River at Battle Mountain Gage, Standards of Water Quality, NAC 445A.205, with warm-water fishery as the most restrictive beneficial use.

Zinc: The zinc limitations are based on the Standards for Toxic Materials Applicable to Designated Waters, NAC 445A.144, Aquatic Life Standards, using a hardness of 167 mg/L as CaCO₃. The hardness value is the average of the fourteen analyzed samples taken three meters upstream of Outfall 002 from October 1997 through December 1998. The daily maximum, 0.15 mg/L, is the 1-hour average, acute, limitation and the 30-day average, 0.14 mg/L, is the 96-hour, chronic, limitation.

<u>pH</u>: The pH limitation is based on the Humboldt River at Battle Mountain Gage, Standards of Water Quality, NAC 445A.205, requirements to maintain existing higher quality. The pH range of between 7.0 and 8.5 is based on water contact recreation and wildlife propagation as the most restrictive beneficial uses.

<u>Temperature</u>: The temperature limitation on the discharges to the river is based on the Humboldt River at Battle Mountain Gage, Standards of Water Quality, NAC 445A.205, with warm-water fishery as the most restrictive beneficial use. The temperature limitation on the discharge to Rock Creek is based on the intermittent nature of the creek and the additional cooling that would occur prior to discharge to the Humboldt River.

Procedures for Public Comment: The Notice of the Division's intent to reissue a permit authorizing the facility to discharge to surface waters of the State of Nevada subject to the conditions contained within the permit, is being sent to the **Elko Daily Free Press** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing until 5:00 P.M. December 21, 2001, a period of 30 days following the date of the public notice. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator of EPA Region IX or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted. Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determined to be appropriate. All public hearings must be conducted to accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.238.

Proposed Determination: The Division has made the tentative determination to issue the proposed permit for a five (5) year period.

Prepared by: Bruce Holmgren

November 2001

 $i:\\ \\ ...\\ \\ barrick\\ \\ 2001\\ \\ nv22675.fac$